REMARKS

The following remarks are made in response to the Final Office Action mailed July 26, 2010. Claims 34-37 have been previously withdrawn from consideration. Claims 1-17, 20-21 and 40 have been previously cancelled. Claims 18, 19, 22-33, 38, 39, and 41-44 were rejected. With this Response, claims 18, 27, 28, 38, 39 and 44 have been amended. Claims 18, 19, 22-33, 38, 39, and 41-44 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 112

Claims 43 and 44 were rejected under 35 U.S.C. 112, first paragraph, and claim 44 was rejected under 35 U.S.C. 112, second paragraph. Claim 44 has been amended to recite the *test* areas are sealed, overcoming the section 112, second paragraph rejection.

Regarding the section 112, first paragraph rejections, the Office Action stated "there is nothing in the specification to that [sic] discloses the protective layer to be made of either a patterned photoresist layer (claim 43) or a soldering resist layer (claim 44). However, the specification discloses, "the test areas may be sealed by application of an, in particular patterned, photoresist layer or soldering resist layer...." Specification at p. 7, ll. 23-25. Applicants therefore respectfully submit the test areas being sealed by a patterned photoresist or a soldering resist layer is fully supported by the specification.

Therefore, Applicants believe the rejections under 35 U.S.C. 112 have been overcome.

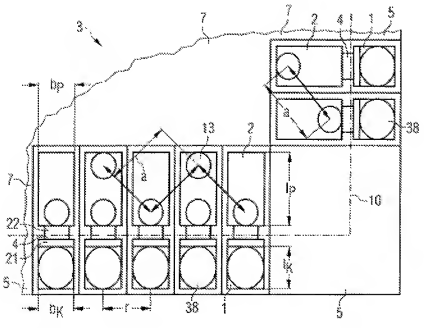
Claim Rejections under 35 U.S.C. § 103

Claims 18, 26-28, 38, 39 and 41-44 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Kim et al. (US 6,159,826; "Kim") in view of Strauss (US 5,729,449; "Strauss") and in view of Takemae et al. (US 4,744,061; "Takemae"). Applicants respectfully traverse these rejections.

Independent claims 18, 28, 38 and 39 have all been amended to further define the test and contact areas. More specifically, these claims have been amended to note that the tops of the test

and contact areas lie in a common plane that is parallel to the plane of the top side of the semiconductor chip. Further, the independent claims recite the contacts being square and the test areas being rectangular. Figure 1 of the application is reproduced below and illustrates an example of the arrangement recited in the claims.

FIG 1



As illustrated in Figure 1, the top sides of the contact areas 1 and the test areas 2 are parallel to the plane of the top surface of the semiconductor chip 3. The contact areas 1 are square shaped and the test areas 2 are rectangular. The specification notes that the larger sized test areas allows more reliable contact-making of test tips, among other things. See Specification at p. 2.

The Office Action refers to the sizes of the contacts disclosed in Figure 5 of Kim. However, Figure 5 of Kim is a side sectional view and thus does not illustrate the tops of the contacts being parallel to the top surface of the semiconductor chip. Further, the Office Action refers to vertical and horizontal dimensions, rather that the dimension of the top of the contacts that is parallel to the top side of the chip.

The Office Action thus fails to identify a teaching of test areas and contact areas having the relative shapes and dimensions recited in the claims.

Further, claim 18 recites, "the test areas are sealed and the contact areas are not sealed." Claims 28, 38 and 39 include similar limitations. As noted above, the claims have been amended to further define and differentiate the recited test areas and contact areas. Referring to Kim, the Office Action equates portions 56a and 56b of the conductive pattern 56 with the test areas and contact areas, respectively, recited in the claims. However, Kim explicitly discloses portion ***56b*** as being the test area:

> In FIG. 7, the internal circuit 52 of the semiconductor chip 32 is electrically tested by probing a wafer probing tip 60 onto the wafer probing pad 38, which is the extended portion ***52b***

Kim at col. 4, ll. 1-4 (emphasis added).

Thus, Kim fails to disclose the structural limitations recited in claim 18, such as the contact and test areas being arranged in the passive and active areas, respectively.

Further, MPEP 2143.02 notes,

> A rationale to support a conclusion that a claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with *no change in their respective functions*....

(Citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, 82 USPQ2d 1385, 1395 (2007), emphasis added). Equating the wafer probing portion 56b of Kim with the recited contact areas and the bonding pad portions 56a of Kim with the recited test areas completely changes the function of the cited prior art elements.

To establish *prima facie* obviousness, all claim limitations must be considered. MPEP 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, (CCPA 1970)). The Office Action admits that Kim and Strauss fail to disclose each element of the claims. More specifically, the Office Action admits that Kim and Strauss fail to teach sealed test areas as recited in the claims. The Office Action relies on Takemae for this element, alleging it would have been obvious to modify

the device of Kim by sealing the test areas, stating "One would have been motivated to seal the test areas to prevent short circuiting and contamination of the device." Office Action at p. 8.

The Office Action thus suggests modifying Kim to seal its "test areas" – portion 56a/bonding pads 36 – in the manner allegedly disclosed in Takemae. However, this would result in a non-functioning device, since the bonding pads would no longer be exposed. MPEP 2143.01 notes, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Still further, there would be no reason to seal portion 56b of Kim, and Kim actually teaches away from this concept. Prior art references must be considered in their entirety, including portions that teach away from the claim elements. MPEP 2141.02VI. Kim teaches cutting away portion 56a by cutting along the chip scribe lane 34. See Kim at Figs. 5 and 6, and col. 3, ll. 55-58. Thus, Kim teaches away from sealing test areas after testing as allegedly taught by Takemae, by instead teaching cutting away the wafer probe portions used for testing. Since this portion is cut away, there is no reason to seal portion 56b.

To establish *prima facie* obviousness, all claim limitations must be considered. MPEP 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, (CCPA 1970)). The Office Action fails to identify teachings in the cited prior art of the test and contact areas as defined in the claims, as well as the remaining structure recited in the claims relative to the test and contact areas.

Accordingly, Applicants respectfully submit the Office Action fails to establish *prima facie* obviousness of claims 18, 26-28, 38, 39 and 41-44.

Claims 19, 22-25 and 29-33 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Kim in view of Strauss and Takemae as applied to claims 18 and 28 above, and further in view of Henson (US 6,133,054, prior art of record).

These claims all depend on claim 18 or claim 28, and are therefore allowable for at least the same reasons.

CONCLUSION

In view of the above, Applicant respectfully submits that all of the pending claims are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of the claims are respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

Please consider this a Petition for Extension of Time for a sufficient number of months to enter these papers, if appropriate. At any time during the pendency of this application, please charge any additional fees or credit overpayment to Deposit Account No. 500471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Mark L. Gleason at Telephone No. (612) 767-2503, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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